

polypeptide which is at least about 80% identical, more preferably at least about 90% identical, more preferably yet at least about 95% identical, and most preferably at least about 98% identical to the above polypeptides, and wherein said polypeptide is capable of binding to LDL; or a biologically active fragment of any of the above polypeptides wherein the fragment is capable of binding to LDL.--

Replace the paragraph beginning at page 34, line 3, with the following rewritten paragraph:

--Thus, a diagnostic embodiment of the invention is the adaptation of, e.g., a peptide complementary to one of the LBPs, by radiolabeling it and using it as an injectable imaging agent for detection of occult atherosclerosis. The peptide is selected from those known to bind to LBPs, e.g., RRRRRRR (SEQ ID NO:52) or KKLKLXX (SEQ ID NO:53), or any other polycationic peptide which binds to the highly electronegative domains of the LBPs. For extracorporeal detection with a gamma scintillation (Anger) camera, technetium-binding ligands, e.g., CGC, GGCGC, or GGCGCF, can be incorporated into the peptides at the N-terminus or C-terminus for ^{99m}Tc labeling. For external imaging by magnetic resonance imaging (MRI), e.g., the gadolinium-binding chelator, diethylene triamine penta-acetic acid (DTPA), is covalently bound to the N- or C-terminus of the peptides. In yet other embodiments, the LBP-binding peptides are covalently bound, e.g., to magnetic ion oxide particles by standard methods known to those skilled in the art, e.g., conjugating the peptides with activated polystyrene resin beads containing magnetic ion oxide...--

In the Claims:

Add new claims 38-104.

--38. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence that is at least about 80% identical to the sequence of SEQ ID NO:2, wherein the polypeptide binds to LDL.

39. The nucleic acid of claim 38, wherein the amino acid sequence is at least about 90% identical to the sequence of SEQ ID NO:2.

40. The nucleic acid of claim 38, wherein the amino acid sequence is at least about 95% identical to the sequence of SEQ ID NO:2.

41. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising the sequence of SEQ ID NO:2.

42. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence that is at least about 80% identical to the sequence of SEQ ID NO:7, wherein the polypeptide binds to LDL.

43. The nucleic acid of claim 42, wherein the amino acid sequence is at least about 90% identical to the sequence of SEQ ID NO:7.

44. The nucleic acid of claim 42, wherein the amino acid sequence is at least about 95% identical to the sequence of SEQ ID NO:7.

45. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising the sequence of SEQ ID NO:7.

46. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence that is at least about 80% identical to the sequence of SEQ ID NO:43, wherein the polypeptide binds to LDL.

47. The nucleic acid of claim 46, wherein the amino acid sequence is at least about 90% identical to the sequence of SEQ ID NO:43.

48. The nucleic acid of claim 46, wherein the amino acid sequence is at least about 95% identical to the sequence of SEQ ID NO:43.

49. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising the sequence of SEQ ID NO:43.

50. The nucleic acid of claim 49, wherein the polypeptide consists of the sequence of SEQ ID NO:43.

51. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence that is at least about 80% identical to the sequence of SEQ ID NO:47, wherein the polypeptide binds to LDL.

52. The nucleic acid of claim 51, wherein the amino acid sequence is at least about 90% identical to the sequence of SEQ ID NO:47.

53. The nucleic acid of claim 51, wherein the amino acid sequence is at least about 95% identical to the sequence of SEQ ID NO:47.

54. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising the sequence of SEQ ID NO:47.

55. The nucleic acid of claim 54, wherein the polypeptide consists of the sequence of SEQ ID NO:47.

56. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence, wherein the amino acid sequence binds to LDL and is at least about 80% identical to a portion of the sequence of SEQ ID NO:2 or SEQ ID NO:7 that binds to LDL.

57. The nucleic acid of claim 56, wherein the amino acid sequence is at least about 90% identical to a portion of the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:7.

58. The nucleic acid of claim 56, wherein the amino acid sequence is at least about 95% identical to a portion of the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:7.

59. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence, wherein the amino acid sequence binds to LDL and is at least about 80% identical to a portion of the sequence of SEQ ID NO:43 or SEQ ID NO:47 that binds to LDL.

60. The nucleic acid of claim 59, wherein the amino acid sequence is at least about 90% identical to a portion of the amino acid sequence of SEQ ID NO:43 or SEQ ID NO:47.

61. The nucleic acid of claim 59, wherein the amino acid sequence is at least about 95% identical to a portion of the amino acid sequence of SEQ ID NO:43 or SEQ ID NO:47.

62. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence identical to a fragment of at least ten amino acid residues of SEQ ID NO:2.

63. The nucleic acid of claim 62, wherein the polypeptide binds to LDL.

64. The nucleic acid of claim 62, wherein the amino acid sequence is identical to a fragment of at least about 20 amino acid residues of SEQ ID NO:2.

65. The nucleic acid of claim 62, wherein the amino acid sequence is identical to a fragment of at least about 30 amino acid residues of SEQ ID NO:2.

66. The nucleic acid of claim 62, wherein the amino acid sequence comprises SEQ ID NO:3 SEQ ID NO:4, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, or SEQ ID NO:28.

67. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence identical to a fragment of at least ten amino acid residues of SEQ ID NO:7.

68. The nucleic acid of claim 67, wherein the polypeptide binds to LDL.

69. The nucleic acid of claim 67, wherein the amino acid sequence is identical to a fragment of at least about 20 amino acid residues of SEQ ID NO:7.

70. The nucleic acid of claim 67, wherein the amino acid sequence is identical to a fragment of at least about 30 amino acid residues of SEQ ID NO:7.

71. The nucleic acid of claim 67, wherein the amino acid sequence comprises SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, or SEQ ID NO:22.

72. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence identical to a fragment of at least ten amino acid residues of SEQ ID NO:43.

73. The nucleic acid of claim 72, wherein the polypeptide binds to LDL.

74. The nucleic acid of claim 72, wherein the amino acid sequence is identical to a fragment of at least about 20 amino acid residues of SEQ ID NO:43.

75. The nucleic acid of claim 72, wherein the amino acid sequence is identical to a fragment of at least about 30 amino acid residues of SEQ ID NO:43.

76. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence identical to a fragment of at least ten amino acid residues of SEQ ID NO:47.

77. The nucleic acid of claim 76, wherein the polypeptide binds to LDL.

78. The nucleic acid of claim 76, wherein the amino acid sequence is identical to a fragment of at least about 20 amino acid residues of SEQ ID NO:47.

79. The nucleic acid of claim 76, wherein the amino acid sequence is identical to a fragment of at least about 30 amino acid residues of SEQ ID NO:47.

80. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence, wherein the amino acid sequence binds to LDL and differs by one or more conservative amino acid substitutions from the sequence of SEQ ID NO:2 or SEQ ID NO:7.

81. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence, wherein the amino acid sequence binds to LDL and differs by one or more conservative amino acid substitutions from the sequence of SEQ ID NO:43 or SEQ ID NO:47.

82. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence, wherein the amino acid sequence binds to LDL and differs by one or more conservative amino acid substitutions from the sequence of a fragment of at least ten amino acid residues of SEQ ID NO:2 or SEQ ID NO:7.

83. The nucleic acid of claim 82, wherein the amino acid sequence differs by one or more conservative amino acid substitutions from the sequence of a fragment of at least about 20 amino acid residues of SEQ ID NO:2 or SEQ ID NO:7.

84. The nucleic acid of claim 82, wherein the amino acid sequence differs by one or more conservative amino acid substitutions from the sequence of a fragment of at least about 30 amino acid residues of SEQ ID NO:2 or SEQ ID NO:7.

85. An isolated nucleic acid comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence, wherein the amino acid sequence binds to LDL and differs by one or more conservative amino acid substitutions from the sequence of a fragment of at least ten amino acid residues of SEQ ID NO:43 or SEQ ID NO:47.

86. The nucleic acid of claim 85, wherein the amino acid sequence differs by one or more conservative amino acid substitutions from the sequence of a fragment of at least about 20 amino acid residues of SEQ ID NO:43 or SEQ ID NO:47.

87. The nucleic acid of claim 85, wherein the amino acid sequence differs by one or more conservative amino acid substitutions from the sequence of a fragment of at least about 30 amino acid residues of SEQ ID NO:43 or SEQ ID NO:47.

88. An isolated nucleic acid comprising a nucleotide sequence that specifically hybridizes to the sequence of SEQ ID NO:11 or SEQ ID NO:16.

89. The nucleic acid of claim 88, wherein the nucleotide sequence encodes a polypeptide that binds to LDL.

90. The nucleic acid of claim 88, wherein the nucleotide sequence is at least about 80% identical to the sequence of SEQ ID NO:11 or SEQ ID NO:16.

91. The nucleic acid of claim 88, wherein the nucleotide sequence is at least about 95% identical to the sequence of SEQ ID NO:11 or SEQ ID NO:16.

92. The nucleic acid of claim 88, wherein the nucleotide sequence comprises the sequence of SEQ ID NO:11 or SEQ ID NO:16.

93. An isolated nucleic acid comprising a nucleotide sequence that specifically hybridizes to the sequence of SEQ ID NO:45 or SEQ ID NO:48.

94. The nucleic acid of claim 93, wherein the nucleotide sequence encodes a polypeptide that binds to LDL.

95. The nucleic acid of claim 93, wherein the nucleotide sequence is at least about 80% identical to the sequence of SEQ ID NO:45 or SEQ ID NO:48.

96. The nucleic acid of claim 93, wherein the nucleotide sequence is at least about 95% identical to the sequence of SEQ ID NO:45 or SEQ ID NO:48.

97. The nucleic acid of claim 93, wherein the nucleotide sequence comprises the sequence of SEQ ID NO:45 or SEQ ID NO:48.

98. An isolated nucleic acid comprising the nucleotide sequence of SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, or SEQ ID NO:33.

99. A recombinant vector comprising the nucleic acid of claim 38.

100. A recombinant vector comprising the nucleic acid of claim 42.

101. A cell comprising the recombinant vector of claim 99.

102. A cell comprising the recombinant vector of claim 100.

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103. A method of producing a polypeptide, the method comprising culturing the cell of claim 101 under conditions that permit expression of the polypeptide.

104. A method of producing a polypeptide, the method comprising culturing the cell of claim 102 under conditions that permit expression of the polypeptide.

Cancel claims 1-37 without prejudice.

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